

What is claimed is:

1. A digital-to-analog converting circuit comprising:
  - a first potential terminal for supplying a first potential;
  - a second potential terminal for supplying a second potential;
  - 5 an output node for outputting an analog signal;
  - a first resistor circuit having a plurality of first resistors connected in series between a first node and the output node through a plurality of first connecting points;
- 10 a first switching circuit having a plurality of first switches each of which is connected between the first potential terminal and one of the first connecting points and the first node;
- 15 a second resistor circuit having a plurality of second resistors connected in series between a second node and the output node through a plurality of second connecting points;
- 20 a second switching circuit having a plurality of second switches each of which is connected between the second potential terminal and one of the second connecting points and the second node; and
- a control circuit connected to the first and second switching circuits for controlling the first and second switches.

2. A digital-to-analog converting circuit according to claim 1, wherein the first switching circuit further has a first switch connected between the first potential terminal and the

output node.

3. A digital-to-analog converting circuit according to  
claim 1, wherein the second switching circuit further has a second  
switch connected between the second potential terminal and the  
5 output node.

4. A digital-to-analog converting circuit according to  
claim 1, wherein the first switches are P-channel type MOS  
transistors and the second switches are N-channel type MOS  
transistors.

10 5. A digital-to-analog converting circuit according to  
claim 1, wherein the control circuit includes a first decoder  
for controlling the first switches and a second decoder for  
controlling the second switches.

15 6. A digital-to-analog converting circuit according to  
claim 1, wherein the first potential is a reference potential  
and the second potential is a ground potential.

7. A digital-to-analog converting circuit according to  
claim 1, further comprising an amplifier connected to the output  
node for amplifying the analog signal.

20 8. A digital-to-analog converting circuit comprising:  
a first potential terminal supplying a first potential;  
a second potential terminal supplying a second potential;  
an output node providing an analog signal;  
a plurality of first resistors connected in series between  
25 a first node and the output node, the first resistors being

connected each other at a plurality of first connecting points; a plurality of first switches each of which is connected between the first potential terminal and one of the first connecting points and the first node;

5 a plurality of second resistors connected in series between a second node and the output node, the second resistors being connected each other at a plurality of second connecting points; a plurality of second switches each of which is connected between the second potential terminal and one of the second connecting points and the second node; and

10 a control circuit connected to control the first and second switches.

9. A digital-to-analog converting circuit according to claim 8, further comprising an additional first switch connected 15 between the first potential terminal and the output node.

10. A digital-to-analog converting circuit according to claim 8, further comprising an additional second switch connected between the second potential terminal and the output node.

11. A digital-to-analog converting circuit according to 20 claim 8, wherein the first switches are P-channel type MOS transistors and the second switches are N-channel type MOS transistors.

12. A digital-to-analog converting circuit according to claim 8, wherein the control circuit includes a first decoder 25 for controlling the first switches and a second decoder for

controlling the second switches.

13. A digital-to-analog converting circuit according to claim 8, wherein the first potential is a reference potential and the second potential is a ground potential.

5 14. A digital-to-analog converting circuit according to claim 8, further comprising an amplifier connected to the output node for amplifying the analog signal.

15. A digital-to-analog converting circuit comprising:  
a first potential terminal supplying a first potential;  
10 a second potential terminal supplying a second potential;  
an analog node providing an analog signal;  
a plurality of first resistors connected in series between a first node and the analog node through a plurality of first connecting nodes;

15 a plurality of first switches each of which is connected between the first potential terminal and one of the first connecting nodes and the first node;

20 a plurality of second resistors connected in series between a second node and the output node through a plurality of second connecting nodes;

a plurality of second switches each of which is connected between the second potential terminal and one of the second connecting nodes and the second node; and

25 a control circuit connected to control the first and second switches.

16. A digital-to-analog converting circuit according to claim 15, further comprising an additional first switch connected between the first potential terminal and the output node.

17. A digital-to-analog converting circuit according to 5 claim 15, further comprising an additional second switch connected between the second potential terminal and the output node.

18. A digital-to-analog converting circuit according to claim 15, wherein the first switches are P-channel type MOS 10 transistors and the second switches are N-channel type MOS transistors.

19. A digital-to-analog converting circuit according to claim 15, wherein the control circuit includes a first decoder for controlling the first switches and a second decoder for 15 controlling the second switches.

20. A digital-to-analog converting circuit according to claim 15, wherein the first potential is a reference potential and the second potential is a ground potential.

21. A digital-to-analog converting circuit according to 20 claim 15, further comprising an amplifier connected to the output node for amplifying the analog signal.